

ABSTRACT

In a method of affecting cleaning or chamber process
5 control to remove residues of fluorinated discharges from
internal PECVD chamber hardware during manufacture of a
semiconductor or integrated circuit, the improvement of removing
the fluorinated discharges without opening the chamber and
without causing chamber downtime, comprising:

- 10 a) maximizing H-atom concentration in a gas mix of a
plasma containing H_2 through the use of high rf
power and low pressure to obtain an in-situ H_2
plasma; and
- b) subjecting a reactor chamber containing build-up
15 residues from previous chamber treatment with a
fluorinated plasma, with the in-situ H_2 plasma from
step a) without opening the chamber and without
shutting down the chamber to remove the build-up
residues of the fluorinated plasma.

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